

DAC 24/96 (CS8416+AK4393/6)

Position	Role	Value	Manufacturer	Type	Value	Notes
Digital 3.3V						
C23	Smoothing	2200 uF 25V	Nichicon	FW	2200uF 50V	
C6	C23 Bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
U4	9V Regulator	L7809CT	On Semiconductor	MC7809CT	-	Much lower noise
C27	9V Regulator C Out	10 uF 16V	Elna	ROA (Cerafine)	100 uF 35V	
C8	C27 bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
U5	3.3V LDO Regulator	AMS1117-33	National Semiconductor	LM1117	3.3V	
C29	3.3V Regulator C Out	10 uF 16V	Elna	ROA (Cerafine)	100 uF 35V	
C9	C27 bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
Analog 3.3V						
U6	3.3V LDO Regulator	AMS1117-33	National Semiconductor	LM1117	3.3V	
C34	3.3V Regulator C Out	10 uF 16V	Elna	ROA (Cerafine)	100 uF 35V	
C21	C34 Bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
Analog 5V						
U8	5V LDO Regulator	AMS1117-5	National Semiconductor	LM1117	5V	
C31	5V Regulator C Out	10 uF 16V	Elna	ROA (Cerafine)	100 uF 35V	
C11	C31 Bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
CS8416 Decoupling						
C2	RXN Decoupling	10 nF 50V	Evov-Rifa	SMR	100 nF 50V	
C3	VA Decoupling	100 nF 50V	Panasonic	FM	100 uF 25V	
C36	CRIP	1 nF 50V	Panasonic	ECHU 0603 *	1000 pF 16V	Alt.: NPO 0603
C5	CFILT	22 nF 50V	Evov-Rifa	SMR	22 nF 50V	
C28	VD Decoupling	10 uF 16V	Sanyo	Oscon SC/SA	47 uF/100uF 16V	Alt.: Solid Elcos NCC, Nichicon
C4	VD Decoupling HF	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
AK4393/6 Decoupling						
C30	DVDD Decoupling	10 uF 16V	Panasonic	FM	100 uF 25V	Alt.: 47 uF/100uF 16V Solid Elcos
C18	DVDD Decoupling HF	100 nF 50V	ANY	X7R 0603 *	100 nF 50V	Oscon, NCC, Nichicon W/O bypass
C32	AVDD Decoupling	10 uF 16V	Elna	ROA (Cerafine)	100 uF 35V	
C19	AVDD Decoupling HF	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
C33	VREF Decoupling	10 uF 16V	Sanyo	Oscon SC/SA	10 uF 25V	Alt.: Solid Elcos NCC, Nichicon
C20	VREF Decoupling HF	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
C35	VCOM Decoupling	10 uF 16V	Elna	ROA (Cerafine)	10 uF 35V	Should be 10uF!!! Critical!
C22	VCOM Decoupling HF	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
OpAmp Positive PS						
C24	Smoothing	2200 uF 25V	Nichicon	FW	4700uF 50V	
C12	C24 Bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
U9	15V Regulator	L7815CT	On Semiconductor	MC7815CT	-	Much lower noise
C38	15V Regulator C Out	330uF 25V	Elna	ROA (Cerafine)	330 uF 35V	
C14	OpAmp Decoupling	100 nF 50V	Elna	RFS (Silmic II)	100 uF 35V	
OpAmp Negative PS						
C25	Smoothing	2200 uF 25V	Nichicon	FW	3300uF 50V	
C15	C25 Bypass	100 nF 50V	Evov-Rifa	SMR	100 nF 50V	
U10	-15V Regulator	L7915CT	On Semiconductor	MC7915CT	-	Much lower noise
C39	-15V Regulator C Out	330uF 25V	Elna	ROA (Cerafine)	330 uF 35V	
C17	OpAmp Decoupling	100 nF 50V	Elna	RFS (Silmic II)	100 uF 35V	
Signal Path						
C1	SPDIF Coupling	10 nF 50V	Wima	FKP2	10 nF 63V	Specific for pulse apps
R24-R34	LPF	1KOhm 1/4W	PRP	PR9372	1KOhm 1/4W	
C40-C43	LPF	1000 pF	Wima	FKP2	1000 pF 100V	Best industrial cap for LPF
C46-C47	LPF	3300 pF	Wima	FKP2	3300 pF 100V	Best industrial cap for LPF
U3	Opamp	NE5532	Texas Instruments	OPA827	x2 on BrownDog	Alt.: National LME49720
CNEW	Opamp V+/V- Decoupling	NEW	Wima	FKP2	10 nF 63V	

* direct on-pin decoupling

Evov-Rifa SMR could be replaced with Panasonic ECHU (SMD but 4,8mm long), both have PPS dielectric which is best for bypassing